DOCUMENT RESUME

ED 157 615 PS 010 023

AUTHOR Taylor, Lorne J.
TITLE Evaluation of Preschool Programs. Research Bulletin No. 76-006.
INSTITUTION Memorial Univ., St. John's (Newfoundland).
PUB DATE Jun 76
NOTE 14p.; First draft of this paper was presented at the Annual Convention of the Canadian Psychological Association (June, 1976)

EDRS PRICE MF-$0.83 HC-$1.67 Plus Postage.
DESCRIPTORS *Classroom Observation Techniques; Classroom Research; *Early Childhood Education; Evaluation Criteria; *Evaluation Methods; *Formative Evaluation; Interaction Process Analysis; *Preschool Evaluation; Program Content; Program Effectiveness; Research Design; Research Problems; *Summative Evaluation

ABSTRACT

This paper presents a discussion of evaluation methods which can be used in preschool programs and emphasizes the importance of considering both outcome and process variables. Emphasizing the limitations of research which utilizes only outcome measures, the paper focuses on the benefits of an analysis of ongoing processes and interactions within early childhood programs. Two methods for observing and recording process variables are described. The first involves an open system consisting of actual descriptions or recordings of specimen behaviors of teachers and children. The second, a closed system, involves coded descriptions and includes time sampling, event sampling and trait ratings. The paper suggest that these methods of process evaluation can be used effectively to describe teaching practices, to train teachers, to monitor instructional programs and to investigate relationships between classroom activities and pupil growth. Methodological issues which arise in the use of process evaluation are also discussed. Included in this discussion are the problems of instrument choice, observer reliability, and the consideration of the degree of control the researcher has over the selection and supervision of the program being evaluated. It is suggested that only through both outcome and process evaluation will it be possible to develop the best procedures for educating young children in preschool programs. (BD)

****
* Reproductions supplied by EDRS are the best that can be made *
* from the original document. *
****

ED157615

U.S. DEPARTMENT OF HEALTH, EDUCATION & WELFARE
NATIONAL INSTITUTE OF EDUCATION

THIS DOCUMENT HAS BEEN REPRODUCED EXACTLY AS RECEIVED FROM THE PERSON OR ORGANIZATION ORIGINATING IT. POINTS OF VIEW OR OPINIONS STATED DO NOT NECESSARILY REPRESENT OFFICIAL NATIONAL INSTITUTE OF EDUCATION POSITION OR POLICY

EVALUATION OF PRESCHOOL PROGRAMS*

Lorne J. Taylor, Ph.D.

Institute for Research in Human Abilities
Memorial University of Newfoundland

"PERMISSION TO REPRODUCE THIS MATERIAL HAS BEEN GRANTED BY

Lorne Taylor

TO THE EDUCATIONAL RESOURCES INFORMATION CENTER (ERIC) AND USERS OF THE ERIC SYSTEM."

PS 010023

*The first draft of this paper was presented to Canadian Psychological Association, June 1976.

Research Bulletin No. 76-006

ABSTRACT

In recent years the proliferation of early childhood services has brought about an increasing concern for the quality of child care. Traditional methods of evaluation which employ only the classical experimental model do not yield enough information to answer many important questions relating to the early childhood education programs. Methods of broadening the evaluative model to include an analysis of the ongoing processes within early childhood programs are discussed. A number of purposes which process analysis can meet as well as methodological problems relating to process analysis are also discussed.

EVALUATION OF PRESCHOOL PROGRAMS

The proliferation of day care facilities and early childhood education programs has brought about a growing concern with respect to the type and quality of care provided for children. The question of quality of early childhood care is crucial as suggested by research on the effects of the preschool environment and the development of intellectual and social-emotional competencies in young children. With an increasing number of children receiving care outside the home it is important to understand the effects this has on children. Thus, the key issues in research and evaluation in early childhood programs are similar to those at any educational level. However, as Ryan and Moffitt (1974) suggest traditional models and methods of evaluation research are inappropriate if they only employ the classical experimental model.

The traditional models that Ryan and Moffitt (1974) and Moffitt and Ryan (1975) refer to generally are outcome models of evaluation research. Most evaluation of early childhood programs has taken this approach and report findings such as "remarkable and significant gains have been made in linguistic functioning" (Taylor, et al. 1974) as a result of some particular program. Any number of other studies report similar findings. Beller (1973) reviews 15 studies of early childhood programs and only two mention any type of evaluation other than outcome evaluation. Even then the mention of other forms of evaluation was at best cursory. Essentially the traditional psychometric approach avoids many real issues. For instance, what aspects of the teaching

procedure or teacher's behavior accounts for any changes that occur? If there is a lack of change what aspects of the program may account for it? What are the differences among various programs? The psychometric approach offers no solutions to these questions and cannot indicate differences between programs that result in the varied outcomes reported. For example, a study by de Lacey et al. (1973) reports a marked superiority of a structured preschool program over the more traditional preschool program. However, there is no indication as to the processes that account for the different results. Most other studies can be equally criticized. This is not to say that outcomes are unimportant. It is necessary in some cases to delineate programs that are the most effective for increasing outcomes such as language and intellectual skills in children. However, differences in programs can only be determined through process evaluation. A good example of this is provided by Charters and Jones (1973). They refer to a study which was designed to assess the outcome effects of differentiated staffing on student achievement. The evaluation study reached the conclusion of no consistent difference in achievement gains, the dependent variable, between differentiated and conventional staffing. Charters and Jones (1973), who were at the same time undertaking a process evaluation, clearly show that there were no differences in the independent variable, the type of staffing, either. Thus, the programs which were evaluated and produced similar outcomes were not in fact different and should not have been expected to produce different results.

As Charters and Jones (1973) point out, the outcome evaluation evaluated a non-event. This example indicates clearly the necessity of substantially more comprehensive research to analyze the content and processes of programs to enable a more complete understanding of the outcomes.

There are many types of instruments available that have been adapted for use in observing interaction between teachers and children. In fact, Rosenshine and Furst (1973) indicate that they have documented 120 different systems of process observation and this they see as an underestimate. With this number of observational techniques available it is necessary to categorize the various styles of the instruments. Gordon and Jester (1973) suggest a series of categories based on previous research. The initial style of observational technique is referred to as specimen description, in which the sequences of interaction are recorded by continuous note taking or audio-video tape. This style is characterized by a detailed recording of the behavior observed and is referred to as an open or low inference system as the raw data is available even after the observation is completed. This contrasts to a closed or high inference system of observation in which the data is coded during the observation. As such, the actual behavior of the individuals is not available--rather behaviors may be noted on a check list as they occur and inferences must then be made regarding the actual teaching behavior. There are obvious advantages to both systems. The open system offers a detailed record of behavior that can be examined with no inferences being

made about the teaching behavior. Further, data can be analyzed and coded in a number of different ways over time. However, open systems represent relatively expensive ways of gathering data in time taken to collect, analyze and code the data. Closed systems allow for a sampling of behavior in a more efficient manner. However, problems of inter-rater reliability, the fact that the actual behavioral interactions are not available and inferences must be made regarding the data, represent drawbacks to the closed systems. Ideally the open system using video tape represents the most comprehensive method of examining process variables. However, in many cases due to financial or time constrictions researchers must be satisfied with less than the ideal situation and work within the structure of a closed system. A type of closed system used relatively extensively and referred to by Gordon and Jester (1973) as time sampling is divided into sign and category systems. As Gordon and Jester (1973) indicate sign systems retain some elements of the specific behavior observed as they are listed in the observer's record form and he checks them off as they occur; in category systems this record of behavior is not available as the behavior exhibited is grouped under various labels.

Two other types of closed systems referred to by Gordon and Jester (1973) are event sampling and trait rating. During event sampling the observer records the various events that occur, such as arguments, as opposed to noting the specific behavior of individuals. In trait rating the observer notes the behavior and

then makes an inference regarding the trait possessed by the person being observed. This latter method is, to say the least, somewhat subjective. If a closed system is to be utilized, a combination of scales which provide a time/sign and event sampling probably provide the most useful data for process analysis.

Process analysis can serve a number of different purposes. Rosenshine and Furst (1973) suggest several useful classifications for process analysis. The first is to describe current teaching practices. As is obvious, description is the predominant purpose and the data from this type of analysis is intended to provide some basic data on teaching in early childhood settings. In other words, it provides information regarding the state of early childhood programs. Once there is an adequate baseline, these descriptive studies should lead to correlational and experimental studies rather than more descriptive studies. However, in relation to the school system experimental studies have not followed descriptive studies, rather there has been a plethora of such studies. It is to be hoped that research in early childhood education will not follow this pattern.

The second purpose process analysis can be utilized for is to train teachers. Process analysis can provide a teacher, experienced or inexperienced, with feedback on his own behavior. As well, it can provide teachers with procedures to classify instructional methods and models of instruction. This function could be especially useful in training teachers for early childhood programs. For instance, if a specimen description method through the use of video tape was used to observe beginning teachers

and the beginning teacher analyzed the teaching process with the aid of an expert teacher, it is likely that new teachers would gain considerable insight into the teaching process. Further, if video tapes of an expert teacher working with a class were available, the new teacher would be able to contrast and compare teaching styles and attempt to model some of the behavior to discover which teaching methods or styles would be effective for him.

A third function of process analysis is to monitor instructional programs. There are many experimental approaches being implemented in early childhood education to discover the most effective ways of working with young children. Any two programs may have quite different goals yet the question can still be raised as to whether the actual functioning of the programs is different. The example provided by Charters and Jones (1973) and discussed previously indicates the necessity of monitoring programs to discover if the intentions of the program developer are being implemented. Without evidence that the processes involved in various programs differ, educators should not assume that different goals necessarily mean different instructional behavior within programs. If in practice the instructional activities in a particular program represent low implementation of a program, it is unreasonable to judge the success or failure of the program.

The final function of process evaluation is to investigate relationships between classroom activities and pupil growth. This function is particularly important for early childhood programs and represents a combination of outcome and process analysis. The

outcomes of a particular program are measured perhaps through a pre-test, post-test methodology and are then related to the teaching process through process evaluation. One instrument which has been used in this fashion is the Observation Schedule and Record (OSCAR) (Medley and Mitzel, 1958). However, the OSCAR needs some revision to be used in the preschool setting. Several recent studies (Moffitt and Ryan, 1975; Taylor, 1976) have successfully used the OSCAR to evaluate programs and relate outcomes and processes. Some earlier work by Soar and Soar (1972) utilizing the Teacher Practices Observation Record has also related outcomes and processes. However, on the whole most studies examine either outcomes or processes in isolation. At the present stage, the research in early childhood education should be moving away from these singular evaluations. Yet many persons working in the area neglect the process analysis. For example, a recent paper by Vane (1976) entitled Problems In and Strategies For Evaluating Preschool Programs, totally ignores the whole area of process evaluation and concentrates only on outcome research. Traditional models of evaluation are inappropriate for early childhood education as researchers must begin to investigate in a detailed and systematic sense the relationship between classroom activities and student growth.

There are a number of methodological issues that should be considered before a process analysis is undertaken. One of the major problems is deciding on the appropriate instrument to observe the process variables. There is a large pool of instruments for

observing educational settings and rather than developing new instruments researchers should begin to utilize existing ones to test their usefulness. Many instruments have been utilized in only the study for which they were developed. There is no need for a further proliferation of instrumentents rather, present instruments should be used and refined. Soar and Soar (1972) suggest several useful instruments, the Florida Affective Categories Measure and Teacher Practices Observation Record. As well, with some modification, the Observation Schedule and Record developed by Medley and Mitzel (1958) will prove to be a useful tool. These instruments or a combination of them will, in all likelihood, sample the variables that most researchers wish to examine. Thus, the results of various studies will be comparable as they will examine common variables. Further, as many researchers use these instruments it will provide a broad data base.

A second methodological issue relates to observer reliability. Typically reliability coefficients are calculated on total talleys. What is necessary is to calculate reliability coefficients on each event observed to discover if the observers are in agreement regarding specific events (Mitchell, 1969). Observer reliability will reach an acceptable level when the observers are well trained and given a thorough explanation regarding the specific details of the observational system. Medley and Mitzel (1963) discuss other issues relating to the reliability of observational techniques and the reader is referred to their paper.

A final issue, though not strictly methodological, relates to the degree of control the researcher has over selection and supervision of the program being evaluated. In the experimental preschool the researcher may have considerable control. However, these controlled programs may not be typical of the nature of early childhood programs. Evaluation of programs other than in demonstration settings is clearly needed as many times programs developed through demonstration projects are difficult to implement in the field. In field settings the researcher may have little control. However, the ideal situation is one in which the evaluator and sponsors of the program work in a cooperative effort. It has been the author's experience that when sponsors are made aware of the necessity of evaluation and clearly understand the feedback they will receive, cooperation is generally forthcoming.

In conclusion, it is fair to say that only through both outcome and process evaluation will it be possible to develop procedures on how to best educate young children. Evaluations which take into account the issues raised in the present paper will show where there needs to be further research in early childhood education and suggest ideas for theories starting from empirical data as well as testing already established theories. As yet process analysis of the preschool situation is still just in the beginning stages and there is the need to carry out comprehensive investigations of early childhood programs to increase our knowledge of the nature of preschool teaching and learning and the effects preschool programs have on young children.

REFERENCES

Beller, E. Kuno. Research on organized programs of early education. In Robert M.W. Traverse (ed.), Second Handbook of Research on Teaching. Chicago: Rank McNally College Publishing Company, 1973.

Charters, W. & Jones, J. On the risk of appraising non-events in program evaluation. Educational Researcher, 1973, 2, 5-7.

de Lacey, P.R., Nurcombe, B., Taylor, L.J. & Moffitt, P. Effects of enrichment preschooling: An Australian followup study. Exceptional Children, 1973, 171-176.

Gordon, Ira J. & Jester, R. Emile. Techniques of observing teaching in early childhood and outcomes of particular procedures. In Robert M.W. Traverse (ed.), Second Handbook of Research on Teaching. Chicago: Rank McNally College Publishing Company, 1973.

Medley, D.M. & Mitzel, H.E. A technique for measuring classroom behavior. Journal of Educational Psychology, 1958, 49, 86-92.

Medley, D.M. & Mitzel, H.E. Measuring classroom behavior by systematic observation. In N.L. Gage (ed.), Handbook of Research on Teaching. Chicago: Rank McNally College Publishing Company, 1963.

Mitchell, J.V. Jr. Education's challenge to psychology: The prediction of behavior from person-environment interactions. Review of Educational Research, 1969, 39, 695-721.

Moffitt, Alan R. & Ryan, Thomas J. Schools without curricula: evaluation of some early childhood programs. Canadian Journal of Behavioral Science, 1975, 7,(4), 429-445.

Rosenshine, Barak & Furst, Norma. The use of direct observation to study teaching. In Robert M.W. Traverse (ed.), Second Handbook of Research on Teaching. Chicago: Rand McNally College Publishing Company, 1973.

Ryan, Thomas J. & Moffitt, Alan R. Evaluation of preschool programs. Canadian Psychologist, 1974, 15 (3), 205-219.

Soar, Robert S. & Soar, Ruth M. An empirical analysis of selected follow-through programs: An example of a process approach to evaluation. In I. Gordon (ed.), Early Childhood Education, (The Seventy-first Yearbook of the National Society for the Study of Education), Chicago: University of Chicago: University of Chicago Press, 1972.

Taylor, L.J. Outcome and process evaluation of a day care centre. Canadian Journal of Behavioral Science, (In press) 1976.

Taylor, L.J., Nurcombe, B., & de Lacey, P.R. The ethics of preschool intervention: project enrichment of childhood, Bourke, N.S.W. Australian Journal of Social Issues, 1974, 9 (1), 29-34.

Vane, Julia R. Problems in, and strategies for evaluating preschool programs. Journal of School Psychology, 1976, 14 (1), 39-46.